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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,144	05/04/2001	Ornan Alexander Gerstel	11685US03	9703
23446	7590	04/04/2005	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			WILSON, ROBERT W	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/849,144

Applicant(s)

GERSTEL ET AL.

Examiner

Robert W Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-29 is/are rejected.
- 7) ☒ Claim(s) 12-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) **PRIMARY EXAMINER**
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Claim Rejections - 35 USC § 102

1.0 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.0 Claims 19-29 are rejected under 35 U.S.C. 102(e) as being anticipated by

Gupta (U.S. Patent No.: 5,787,070)

Referring to Claim 19, Gupta teaches: a communication system (Figs 2 & 3).

The Service Modules (Line cards) communicate through a port connected to the redundancy bus (link port) as shown in Fig 2. The redundancy bus provides internal data communication between 39 per Fig 2 (I/O) and the redundancy bus per Fig 2 (Link port)

The Redundancy Module (Spare line card) is connected to the Service Modules (group of line cards). The Redundancy Module (Spare line card) has a port which is connected over a redundancy bus which interconnects the Local ports of the Redundancy Module and Service Modules per Fig 2

The Redundancy Module (Spare Line card) has 106 and 110 per Fig 3 which act as a controller for to the Relays 90 & 92 per Fig 3. The controller switches out the failed Service Module per Fig 2 thus rerouting the data received on the redundancy bus (link port) through the 39 per Fig 2 (I/O) port associated with the failed Service Module (failed link port line card).

Referring to Claim 20, Gupta teaches: An Interface Shelf (28 per Fig 2) (Line card).

The input to the Line Module (39 per Fig 2) (I/O port) supports I/O data.

The Output of the Service Module and Redundancy Module is connected to 76 per Fig 2 (Link Port) support passage of Link port data.

The input to the Redundancy Module is via the bus per Fig 2 (Local port) which passes both data from 76 per Fig 2 (link port) and data from 39 per Fig 2 or I/O.

In Addition Gupta teaches:

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Regarding Claim 21, The output of the Service Module & Redundancy Module per Fig 2 is a link port which is connected to a bus (medium). The Service Module & Redundancy Module performs as a multiplexer/demultiplexer functions per col. 4 lines 27-col. 6 line 6.

Regarding Claim 24, The Redundancy Module (65 per Fig 3) sends control signals for switching consequently the Redundancy Module has an inherent controller. 80 per Fig 3 sends a control signal to the input 98 per Fig 3.

Regarding Claim 25, 39 per Fig 2 (I/O) is routed to 76 per Fig 2 (Link) when a Service Module has not failed per col. 4 line 26-col. 6 line 6.

Regarding Claim 26, 76 per Fig 2 (Link port) is routed to 39 per Fig 2 (I/O) when there is no indication that a Service Module has failed per col. 4 line 26-col. 6 line 6.

Regarding Claim 27, 39 per Fig 2 (I/O) is routed to input to redundancy Module and Service Module via bus per Fig 2 upon indication of a failure per col. 4 line 26-col. 6 line 6.

Regarding Claim 28, The output of the Redundancy Module (76 per Fig 2) (Link port) is routed to the input of the Redundancy Module (Local port) in the event of a failure per col. 4 line 26-col. 6 line 6.

Referring to Claim 29, Gupta teaches:

The input to the Line Module (39 per Fig 2) (I/O port) supports I/O data.

The Output of the Service Module and Redundancy Module is connected to 76 per Fig 2 (Link Port) support passage of Link port data.

The input to the Service Module is via the bus per Fig 2 (Local port) allows 39 per Fig 2 I.O port data to be routed to an input port on a Service Module via the bus (Local port first connection)

The Interface Shelf 28 per Fig 2 (line card) includes a input port to the Redundancy Module (Local port 2 connection)

Claim Objections

2.0 Claims 12-29 are objected to because of the following informalities:

Referring to Claims 12, 14, 15, 18, 19, 20, 25, 26, 27, & 29; the examiner objects to the usage of the slash between I and O because it is not clear whether I and O are referred to or I or O. The examiner believes that the applicant means I and O or Input and Output.

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Referring to Claims 21 & 22, the examiner objects to the usage of the slash between the multiplexer and demultiplexer because it is not clear whether the applicant is referring to a multiplexer and demultiplexer or multiplexer or demultiplexer. The examiner believes that the applicant means multiplexer or demultiplexer.

Referring to Claims 23, the examiner objects to the limitation of a 1xM and 1xN switch because the applicant could not find any place in the specification where a 1xM and 1x N switch is defined. The specification defines a 1x(K+1) switch on Pg 7. The examiner also objects to the usage of variables which are not defined in the specification. The variables defined in the specification are k which is equal to the number of local ports and N which is the # of line cards per Pgs 5 & 7 of the specification. Appropriate correction is required.

The present invention is directed to a line card which contains a I/O port, a local ports, and a link port. The line card can reroute I/O data when a portion of the line card fails without completed bypassing the line card.

The closest prior art is Gupta (U.S. Patent No.: 5,787,070). Gupta discloses a Service Modules (Group of line cards) which received I/O data from a Line Module. The local port is the input via bus to the Redundancy Module and Service Module. The Link port is the output of the Redundancy Module and Service Module.

Pending resolution of the claim objects the closest prior art, Gupta (U.S. Patent No.: 5,787,070), does not disclose, anticipate, or render obvious the following claim limitations:

“upon detection of a failed line card in the group of line cards, rerouting an I/O port of the failed line card through a local port of the failed line card, without completely bypassing said line card” as claimed in Claims 12 & 15.

“providing a group of a plurality of line cards, each of said line cards communicating data through an I/O port and communicating data through a link port wherein each of said line cards is capable of internally communicating data from said I/O port to said link port;

providing at least one spare line card having a spare line card I/O port and a spare line card link port” as claimed in Claim 18.

Response to Amendment

3.0 Applicant's arguments with respect to claims 12-29 have been considered but are moot in view of the new ground(s) of rejection. Please refer to the above rejection for details.

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4.0 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

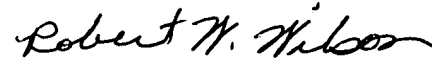
Conclusion

5.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571/272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2661

RWW
3/15/05



PHIRIN SAM
PRIMARY EXAMINER